

Nikon D5100 Experience

The Still Photographer's Guide to Operation and
Image Creation with the Nikon D5100

an eBook by:

Douglas J. Klostermann



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Full Stop. *good writing for better photography*

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1. INTRODUCTION

The introduction of the Nikon D5100 brings forth a worthy successor to its popular predecessor, the D5000. By incorporating the high quality 16.2 megapixel sensor, great low-light performance, and full HD video of the prosumer D7000, the D5100 puts these advanced features in the hands of the dedicated enthusiast, plus includes a fully adjustable high resolution rotating LCD screen. With its 420 pixel RGB exposure metering sensor, accurate 11 point autofocus system, 4 frames per second continuous shooting speed, and easy to navigate information display, the D5100 offers the capability and features required for dedicated photographers who wish to continue to grow.

The Nikon D5100 is clearly an advanced digital SLR, and offers the potential to capture professional quality images in most any situation you wish to use it. But it is merely a tool.



Figure 1 -Detail of the Nikon D5100 digital SLR

It is up to you to make use of its features and capabilities to create the images you envision. Every button, menu item, and Custom Setting of the D5100 is there for a reason: to help you capture the images you want. Some of them are more useful to different types of photographers and shooting situations and you don't need to learn and use them all immediately, but this guide should help to give you the knowledge to confidently use the ones that turn your Nikon D5100 into an image capturing tool that works best for you.

Learning to use and get the most out of a dSLR camera like the D5100 takes time, practice, patience, mistakes, and experimentation. If you are not yet familiar with all the controls of a dSLR and the exposure concepts of digital photography, don't expect to just pick it all up at once, in one or two readings of a single book. (In fact, you wouldn't want to, as the never ending journey of learning and mastering photography is a big part of what it's all about!) Try not to become frustrated when you don't quite understand something or aren't yet getting the results you desire. Instead learn the controls, functions, settings, and concepts little by little, try them out in real life shooting situations, and return to this guide, the manual, and other photography books to address questions and problems you encounter. Continue to learn and to photograph often and it should all begin to come together, sometimes slowly and sometimes in rapid spurts of discovery and understanding.

If you have upgraded from an older dSLR to the D5100, its improved features and capabilities should more easily help you to capture high quality images that you may have been limited in consistently attaining before. If you are new to dSLR photography, you will soon find that using a more versatile camera such as the D5100 can be initially challenging but ultimately more rewarding by offering you more responsiveness and greater control over your shooting and your results. And don't worry, this book will help guide you through its features, controls, and capabilities. Be sure to take it slowly and patiently and start with the basic features and concepts that I will explain. With practice and experience you will soon be shooting with confidence and can begin to take advantage of the camera's more advanced functions.

Using This Guide

There are many different ways to use a digital SLR (dSLR) camera and its controls to capture images, and I'm not going to attempt to explain them all. I am going to concentrate on the ways that I believe are the most practical, useful, and effective. The settings and techniques I discuss apply to many types of general photography, including most travel photography. I will point out other options for users who might wish to work differently and I encourage you to experiment and find the techniques that work best and are most comfortable or intuitive for you. If you typically shoot very specifically, say macro photography or studio photography with complex lighting, some of what I discuss may not apply. But if you are that specialized, I'm sure you are skilled enough to know when and how to adapt what I say!

Since this guide is intended to help you get the most out of your D5100, I will not go into detail about all of the automatic features or Auto and Scene Modes. The D5100 is a sophisticated tool that deserves to be used to its full potential, and that involves taking control of the camera and its functions, which means taking it off Auto, off Program, off automatically selected auto-focus points, off Auto ISO. While this may be more challenging at first, these are the techniques that are necessary to take full advantage of the capabilities of any dSLR including the D5100, and will lead you to having more control and consistency over your image making. Hopefully this will inevitably lead to better images!

As you have probably discovered by now, the camera's *User's Manual* is brief and basic. There is a more detailed *Reference Manual* on the *Reference CD* included with your camera. *Nikon D5100 Experience* will expand on the two manuals and explain not only the features, controls, and menus of the D5100, but more importantly when and why you might want to use them in your photography. However, this guide is not intended to completely replace the manuals, but to be used in conjunction with them, so every bit of information in those manuals will not be repeated here. Among the official manuals' often brief descriptions and sometimes frustratingly incomplete explanations, there is some very valuable information, as well as the basics for buttons, controls, and how to change all the settings. Note that the *D5100 Reference Manual* can also be obtained as a PDF file from the Nikon website:

http://support.nikonusa.com/app/answers/detail/a_id/17325

This guide is intended to be used with the camera in your hands. That is the best way to directly see and understand what is being explained. As you can see, there is a lot to make sense of regarding terminology and controls, so I recommend that you familiarize yourself with the controls and displays of the camera body, as shown on pages 2-7 of the *D5100 User's Manual* and pages 1-10 of the *D5100 Reference Manual* (see *Figure 2*), as well as read through the manuals and attempt to understand as much as possible. Yes, much of it may be complicated and confusing at first, but this guide will explain the uses of the numerous buttons, controls, menus, and settings and concentrate on the essential ones to help you begin taking great images.



Figure 2 - Controls on the top of the D5100

The majority of your settings can be changed with the i Button and Information Display (see *Figure 3*). Press the i Button once to view your settings, and a second time to enable you to navigate to a specific setting with the Multi Controller and access its

options by pressing the OK Button. However, some settings of the Nikon D5100 can be controlled in multiple ways including using the buttons and controls on the camera body while reading the settings on the rear LCD Monitor, or accessing the settings in the Menu after pressing the Menu Button. Explore the options and find the ways that work most quickly and intuitively for you.

Any time I capitalize something in the text, it is a proper term that can be looked up in the Nikon D5100 manuals. I will capitalize the names of actual buttons, controls, camera parts, and menu items, such as Delete Button, Command Dial, Monitor, and Format. Again, please review the camera body and display diagrams in your D5100 manuals to familiarize yourself with the names of various parts, controls, and displays, as I will use these proper names in this text. Words and phrases that are capitalized *and* bold refer to chapters and sections within this guide. Turn on the bookmarks navigation or contents panel or menu in your PDF viewer or e-reader to quickly navigate to these different sections.



Figure 3 - i Button and Information Display

Many of the functions and controls of a dSLR such as the D5100 are closely inter-related, such as the shooting mode, exposure, and the metering mode. As a result of this I must sometimes refer to previous or upcoming sections of the text for further explanation of related function. It is best to read through the entire text, in the order it is organized, before returning to specific sections for further study. It may take multiple readings and experimentation with your camera to fully understand both the individual functions and the relationships between functions.

Some of these items are self-explanatory or are discussed later in the text, and thus I won't go into detail about them here.

2.1 Menu Settings - Playback, Shooting

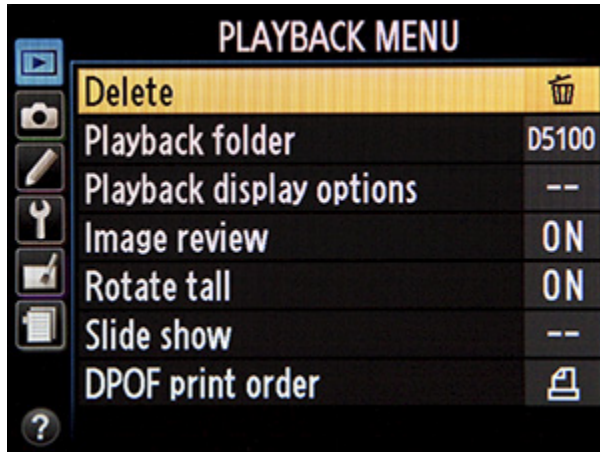


Figure 4 - Playback Menu

Playback Menu

Delete

Use this to delete a single image, a selected group of images, all images taken on a specific date, or all images in the current folder. However, if you are deleting all the images on a card, it is better to use Format Memory Card (see *Setup Menu* below).

Playback Folder

This sets which images will be visible during Playback. Leave on the default setting *Current* and all the images taken with this camera will be visible, unless you create additional folders (see *Shooting Menu*). If you are sharing memory cards between different cameras (which is not at all recommended), or creating additional folders then you can select *All*.

Playback Display Options

This is used to select what information can be viewed with your image during playback. You can view the image without any superimposed data, you can view the image with data and/ or histograms, and other options (see *Figure 5*). I recommend that you select most of these options, and then you can click through these various views when reviewing your images on the rear Monitor. The option *None* will show just the image without any additional information. *Highlights* will show if you have overexposed the highlights (a situation that you typically want to avoid and thus want to be alerted to) by having those areas of the image blink during playback. *RGB Histogram* will also help show if an image's exposure is correct, or if you have overexposed or underexposed it, through the use of graphs. Unless you make use of RGB histograms, this view option is not absolutely necessary. *Shooting Data* will display detailed data of the camera's settings used for each image. This view too may be optional since essential information

consecutive shots) the AE-L/AF-L Button can be used to do this. More about this in the Custom Setting f2 and **Exposure Lock** sections below.

c2: Auto off timers - This is for setting how long the displays on the rear Monitor and in the Viewfinder stay on if no other camera buttons or controls are used (see *Figure 9*). This applies to the Information Display, Menus, image playback, image review, and Live View. (Image playback is when you press the Playback Button to review an image, image review is the automatic display of an image immediately after taking the photo.) It also determines how long the exposure meter remains on after metering has begun with a half press of the Shutter-Release Button. A shorter time will help prevent draining the battery, but may also prove to be annoying. Try setting for *NORM Normal* and adjust if necessary. You can also adjust each setting individually in the *Custom* option. My recommendations are: *Playback/menus* 20s or 1 min; *Image review* 4s or 8s; *Live View* 3 min or 5 min; *Auto meter-off* 20s or 1 min. Adjust these settings to your preferences.

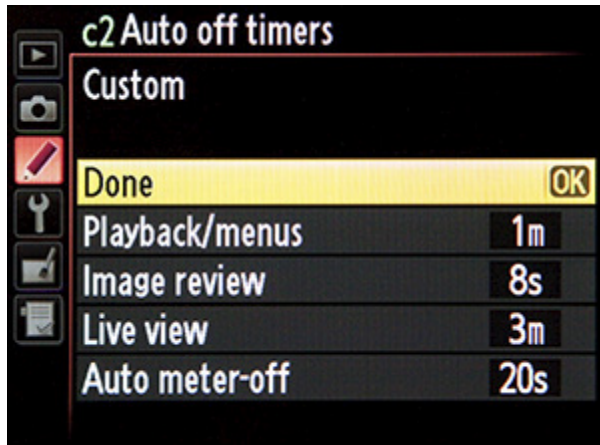


Figure 9 - Custom Setting c2 Auto Off Timers Menu

c3: Self-timer - These are the self-timer settings. Use this to set the *Self-timer delay* between when you press the Shutter-Release Button and when the shot is taken, and the *Number of shots* taken each time with the self-timer. Pretty much self-explanatory.

c4: Remote on duration - If you are using the optional remote shutter release, you will need to set how long you want the camera to be on stand-by before turning off remote mode and reverting back to the previous release mode. Although shorter times will save battery life, 5 minutes or even 10 minutes will most likely prove to be a more reasonable time for setting up shots and working with the remote.

Shooting/Display

d1: Beep - This is used to customize the beep volume that the camera makes for various operations including when focus is achieved and when the self-timer is counting down. You may prefer to turn this *Off* if you find the beeps unnecessary or distracting.

8.3 Spot Metering

This mode meters exclusively on a 3.5mm circular area, approximately 2.5% of the frame area, centered on the selected focus point. Note that the spot is not necessarily in the center of the frame as with Center-Weighted Metering, unless you or the camera has selected the center AF point. So when do you want to use Spot Metering?



Figure 34 - Singer - Use Spot Metering in high-contrast situations to meter for the area you want properly exposed, and do not want the camera to take the background into account when determining exposure. Here, meter an area of skin tone, then lock exposure and recompose if necessary for final image. Shutter speed 1/60, aperture f/4.5, ISO 1600

This, again, is useful for scenes with great variation in light and shadow, or in very critical situations, and where you do not want the camera to take the background into account when determining exposure (as it does with Center-Weighted Metering). One of the most common ways to use it is when metering for proper exposure on a dramatically lit face or subject, where the proper exposure of that part of the image is critical (see *Figure 34*). Be aware that the area the camera is metering does not take into account any other parts of the scene and is very small - not much larger than the brackets you see in the viewfinder surrounding the center focus point.

For advanced users, Spot Metering is used to determine the exposure values of several important parts of the scene, and then the desired exposure is determined and then manually set using Manual Exposure Mode. In this way Spot Metering Mode is used to turn your camera into a light meter, as a tool to determine proper exposure of a subject or scene before switching the camera to Manual Mode (M) for a controlled studio shot, a critical shot, or a series of shots where the lighting is not going to change.

8.4 Manual Metering

Manual Metering isn't actually a mode in your camera, but is a method of metering. This is where you use a light meter or use your camera as a light meter (such as described at the end in the **Spot Metering** section above) and then manually set your exposure based on the meter readings. This is used when you want ultimate control of the metering and exposure.

Manual Exposure mode (M) and manual metering is best put to use in a situation or scene with consistent and possibly challenging lighting (such as a wide range of lights and darks throughout the scene), such as landscape or portrait photography on a sunny day, macro photography, or studio work (see *Figure 34a*). You determine the exposure settings you wish to use by metering a midtone or critical area or areas of the scene. Then adjust the aperture, shutter speed, and ISO settings manually and photograph the situation or scene. You can then adjust the settings to increase or decrease the exposure, based on the results and your desired creative intentions.

If you wish to use manual metering and shoot in Manual Exposure Mode (M), finish reading this chapter to learn more about exposure and metering modes, and then return to the **Manual Exposure Mode (M)** section to review and better understand the relationships between Manual metering, exposure, and shooting in M Mode.



Figure 34a - Egyptian Artifact - Use manual metering in situations with consistent or challenging lighting. Use the Spot Metering mode to determine the exposure settings of a critical area or multiple areas, and set the exposure settings manually using M mode. Shutter speed 1/60, aperture f/6.3, ISO 800

8.5 Metering Modes and Exposure

An example of a critical exposure that will vary depending on which metering mode you use and where you meter in the scene is an image of a bride and groom. The bride is typically dressed in all white, and the groom may be in a black tux or dark suit. If you are using Center-Weighted or Spot Metering and meter the exposure on the bride's dress, the camera will most likely under expose the image and the nice white dress will turn to grey in the photos and the groom's suit will turn into a pool of deep, dark black. If you use Center-Weighted or Spot Metering and meter on the groom's outfit, the camera will most likely over expose and the dark suit will become a medium grey suit, and the bride will disappear into a blown-out blob of white. This is just an example to help you realize the differences and importance of metering modes. It is quite possible that Matrix Metering will properly evaluate the entire scene and capture this situation just fine. But be aware that there are situations where it is critical that you know how the metering modes of the D5100 work, and make a decision for which one will serve you best.

So how would you ensure proper exposure of the above situation? Using Center-Weighted or Spot Metering, meter on the bride's (or groom's) face since that is the most critical part that you want properly exposed, and then lock in that exposure setting (see

What readers are saying about Doug's previous guide, Nikon D7000 Experience:

This book, together with the manual that came with your camera, is all you need to start discovering all the potential of this camera.

-Max M.

I would recommend this to anyone who wants to get a quick start to using their camera. Manuals are nice, but this e-book highlights the important information and gives a quick easy to understand explanation of most all of the functions and controls.

-Ray M.

This e-book is helping me actually understand the camera at my own pace, and best of all is that the book isn't hard to understand. It's a great book that I carry on my iPad wherever I take my camera.

-IME

I found the (camera's) manual good for understanding how to set things up but not much on the why - this book really focuses on the "why." The guide helped me understand why to use specific settings for specific needs. The Custom Settings sections helps to make firm decisions on how to apply settings by understanding the usage of each in addition to knowing how to set them up. I would like to thank you for saving me time - now I'm confident that my camera is well tuned!

-Benoit A.

This manual is a clearly written, concise and useful explanation of the rationale for the seemingly infinite and often confusing settings options. Used in conjunction with the (camera's) manual I feel a bit more confident in understanding how to at last proceed in getting better photographs.

-WLS

It's clear, concise and gets to the heart of the camera's multiple and often confusing options. Very highly recommended - for experienced user and beginner alike. As previous reviewers have remarked, the official manual is very good on what to do, but not so clear on why. Perhaps Nikon should just hire Doug to write their manuals - it would be so much simpler for all concerned!

-GSA

Brilliant - just what i was looking for! A manual for the D7000 that was exciting, clear to follow, had examples and was used by a professional who gave just the right amount of technical info with explanations of why you use those settings, when to use those settings and so on...all properly explained. Doug's book is a joy to follow, well thought through and well written. Nikon should be employing Doug to write every one of their cameras manuals.

-Robert D.

Purchase Nikon D5100 Experience at:

<http://www.dojoklo.com/Full Stop/Nikon D5100 Experience.htm>